

Optimizing the Value of Technology Investments with IT Strategic Planning

Intel IT's strategic planning process is helping us better understand and respond more rapidly to the needs of our business partners while helping us add business value by investing our resources optimally.

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Executive Overview

To help Intel achieve future goals and objectives, Intel IT engages in an annual strategic planning cycle that aligns our activities to those of Intel's business groups. The planning cycle provides Intel's IT leaders with comprehensive direction, including strategies and tactics, over the next three to five years. Each planning cycle includes an in-depth assessment of business goals and challenges, technology trends, environmental factors, and current IT capabilities. We then translate these considerations into resource-feasible roadmaps and investment decisions—prioritizing IT spending and allocating resources based on Intel's business needs to derive the greatest business value from every IT dollar invested.

Recognizing that strategic planning is a continuous and dynamic process, we refine our process to improve and better align our activities. Recent refinements include:

- Streamlining planning activities to minimize resource fluctuations within the organization and improve flexibility and responsiveness.
- Improving the way we use Intel IT Business Capability Frameworks to determine how well our organization supports Intel's business needs and manages our own capabilities and services.

- Adopting IT Roadmap Planning activities to further align with our business partners.
- Changing the way we prioritize investments using an investment framework.

Intel IT's strategic planning process is helping us better understand and respond more rapidly to the needs of our business partners while helping us add business value by investing our resources optimally.

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IT@INTEL

The IT@Intel program connects IT professionals around the world with their peers inside our organization – sharing lessons learned, methods and strategies. Our goal is simple: Share Intel IT best practices that create business value and make IT a competitive advantage. Visit us today at www.intel.com/IT or contact your local Intel representative if you'd like to learn more.

BACKGROUND

Like other IT organizations, Intel IT must focus on the future while staying firmly rooted in day-to-day activities. We must be ready to respond to a rapidly shifting business climate and deliver solutions that are tuned to the needs of the business units and the corporation as a whole, while operating within budget. A sound strategic planning process is fundamental to achieving these goals.

In 2008, we implemented a new IT strategic planning process based on the sustained growth and maturity of our enterprise architecture practices. Our intent was to create an agile, purpose-driven process—one that brings together diverse perspectives while avoiding bureaucratic pitfalls. With that end in mind, we assembled a small strategic planning team comprised of representatives from across IT, whose challenge was to identify the greatest strategic values that IT could deliver to support Intel's vision, mission, and goals. The team tapped into IT subject matter experts (SMEs) at critical engagement points, rather than involve them at every step of the process.

Our resultant approach to strategic planning is:

- **Integrated.** We've integrated our strategic planning cycle with the Intel

corporate planning calendar so that Intel IT's activities are synchronized with the company's direction. Milestones in the new Intel IT planning cycle are timed to deliver information ahead of key Intel decision points and enable flexibility for course adjustments based on those decisions.

- **Holistic.** Our strategic planning process aligns technology investments with Intel's business direction—exploring both elements in depth to understand the whole environment—and consolidates expertise and ideas from across Intel IT.
- **Continuous.** While many organizations replace their strategic plans every two to three years, we use a different approach to keep pace with cyclical and event-driven changes in the environment. The team looks at the plan every six to 12 months and asks: "Has anything shifted in our environment? Does it have the potential to affect our business? Do we need to make any changes?"

Environmental changes have included supplier consolidation (as one supplier acquires another) and the consumerization of IT (as employees ask to connect their own smartphones and tablet computers to the corporate network). Our goal is for the plan to be regularly evaluated and updated as necessary.

Intel IT's strategic planning process aligns IT investments with the strategies of Intel's business groups. IT's objective is to provide a compelling and sustainable competitive advantage for Intel.

—Diane Bryant
Intel Vice President and Chief Information Officer

INTEL IT STRATEGIC PLANNING—AN END-TO-END PROCESS

We engage in a series of strategic planning activities to develop a long-term view of the business goals and challenges, technology trends, and environmental factors that will help shape our direction over the next three to five years. We then translate these considerations into resource-feasible roadmaps and investment decisions.

Our strategic planning process is integrated with our overall IT Management System—an overarching set of high-level strategic initiatives and routine investment management activities. This system, which includes planning, decision making, and calibration phases, helps us align IT activities to the vision and strategy of the business, and also helps us monitor our performance against the strategic goals.

IT Strategic Planning Team Constituents

To gain widespread support—and diverse perspectives—throughout the development of our strategic plan, we engage representatives from a broad range of functional areas within Intel IT as well as our business unit partners (Table 1).

Strategic Planning Activities

Strategic planning is a continuous and dynamic process that helps us improve our organization and better align our investments to address Intel’s long-term goals. The process has increased our understanding of the investments we make and how those investments add business value to meet Intel’s changing needs. Our planning activities are shown in Figure 1.

ENVIRONMENTAL SCAN

In the first quarter of the year, we conduct an Environmental Scan to provide comprehensive

insight into our environment. SMEs from across IT act as a “sensor network,” helping us perform an overall market analysis that takes a high-level, 360-degree look at the major external and internal business factors that may influence the goals and direction of the business and our organization over the next three to five years (Figure 2). These factors include supplier and global technology trends, risks, compliance requirements, sustainability initiatives, strategic business initiatives, and business and workplace activities within Intel. We develop a set of key questions to help us highlight any significant influence or shift that might affect IT.

We then narrow the results of the Environmental Scan to key megatrends—the critical forcing factors we believe will impact Intel’s business results and shape our organization and decision making over the next few years. These megatrends may become topics of “deep dives”—strategic discussions that will later

Table 1. IT Strategic Planning Team Constituents

Role	Responsibility
Business Unit Representatives	Help ensure that business objectives guide the bi-directional exchange of ideas.
Chief Information Officer, Staff, IT General Managers	Make decisions on key outputs from each phase of the IT planning cycle.
Enterprise Architects	Develop a long-term architectural vision; address technology sequencing and feasibility.
IT Benchmark Researchers	Develop IT benchmarks and research industry sources on business and technology trends.
IT Finance Analysts	Develop a three-year financial outlook and the one-year financial plan (grounded in actual spending for the current year).
IT Procurement Specialists	Provide insight into the supply chain and contracts.
IT Strategic Planners	Develop a long-term vision of success and plans for IT capabilities; develop and maintain the formal strategic plan; perform program management and governance functions.
IT Subject Matter Experts	Provide ideas, data, and analysis used throughout the planning cycle.
Research and Development Representatives	Develop research analysis, reports, and required investment profiles consistent with corporate and IT priorities, cross-IT interdependencies, and impact.

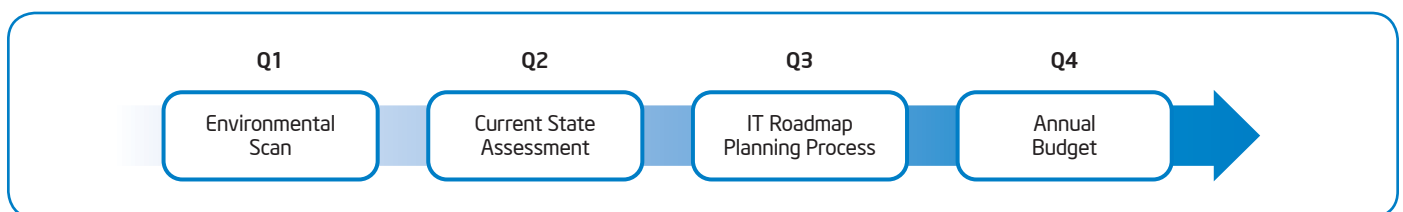


Figure 1. Intel IT’s strategic planning cycle provides a long-term view of environmental factors and IT capabilities; we then translate these considerations into resource-feasible roadmaps and investment decisions.

influence the IT Roadmap Planning process. In 2010, our Environmental Scan identified 10 megatrends affecting IT: affordability, a changing workforce, the consumerization of IT, online sales, predictive analytics, security, services, sustainability, video, and virtualization. Of these 10 megatrends, we selected eight for deep dive reviews with IT management.

CURRENT STATE ASSESSMENT

The Current State Assessment (CSA) provides a standardized process for helping us understand the health of our IT capabilities. We use our Intel IT Business Capability Frameworks to examine how well we’re managing our own operations and how effectively we’re providing services to our business partners across the corporation.

Intel IT Business Capability Frameworks

We developed three IT Business Capability Frameworks to provide an organization-agnostic view of Intel’s business capabilities and IT’s supporting capabilities.

- The **Enterprise Capability Framework** holistically describes core business processes applicable to specific vertical lines of business, such as design engineering, supply chain planning, and human resources.
- The **Cross-Enterprise Capability Framework** describes core business services applicable across all lines of business, such as instant messaging and e-mail.
- The **Infrastructure Services Framework** describes core infrastructure components and services applicable across all enterprise capabilities, such as servers, data centers, and laptops.
- Deliver a cohesive and organized way to discuss our business functions and describe IT capabilities and services.
- Act as a stable structure over time, independent of implementation or organization.
- Support a broad range of strategic uses, including the CSA, budget concentration, supplier mapping, technology, and program dependencies.

The frameworks present a clear picture of the structure of the corporation and the IT systems that support it, help us stay aligned with changing business and IT needs, and provide baseline references for our strategic planning process. They provide important benefits:

A senior IT leader owns each framework. Owners provide oversight and help ensure the planning process follows their framework’s guiding principles and that the three frameworks remain synchronized in content and structure. Because these frameworks support a broad range of strategic uses, our goal is to maximize stability; however, we update them as needed to respond to changing business and IT conditions.

Health Assessments

In the second quarter of each year, we assess the general health of all Intel IT capabilities against business needs with the help of the Intel IT Business Capability Frameworks (see Figure 3). We then conduct a scoring process to qualitatively determine the health of individual capabilities, using a common set of criteria to review the processes and technology necessary to achieve a specific business objective. As a baseline for scoring discussions, we often use a weighted average based on discussions with key stakeholders and enterprise architects.

Together with the final health score, recommendations are made based on any gaps and imbalances that are revealed. These recommendations provide input into the IT Roadmap Planning process that occurs in the next quarter.

IT ROADMAP PLANNING PROCESS

The IT Roadmap Planning process looks out over a three- to five-year horizon, synthesizing the results of the Environmental Scan, the CSA, deep dives, and business partner requirements discussions that happen

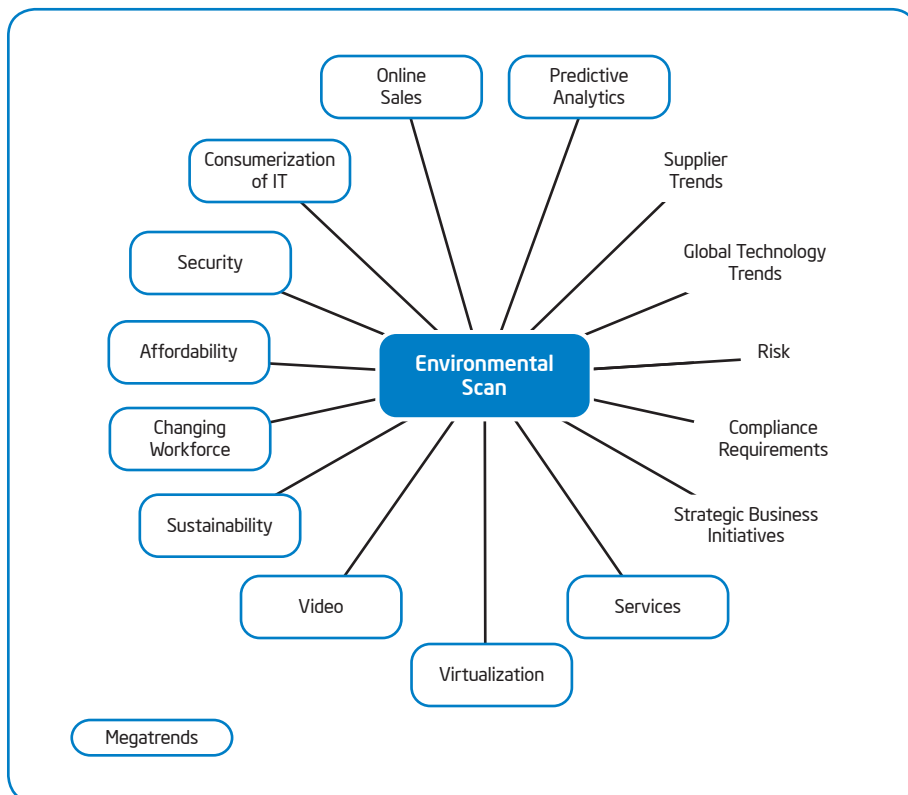


Figure 2. During the Environmental Scan, we identify and analyze the key external and internal influences and competing forces that might affect the business in the future. We then narrow the results to megatrends for further study.

throughout the planning cycle. In the third quarter, we identify 10 to 15 key focus areas, selected from all activities, for further study.

In 2010, we focused on the following topics: business intelligence, collaboration and productivity, the consumerization of IT, data centers, enterprise resource planning (ERP), product development, finance and human resource systems, online sales, security, services, and the supply chain.

Small teams comprised of a strategic planner, an enterprise architect, a finance analyst, and SMEs then develop a vision based on the requirements and strategies of our business partners. Next, the teams determine the key project and program deliverables along with associated value propositions required to meet these needs. We then refine the deliverables and value propositions into five-year roadmaps that deliver the IT capabilities necessary for our business partners to be successful.

Although we look out over five years, we focus most of our effort on the first three years, when clear decision making is a priority. We provide each team with a spending envelope within which they must operate. Teams must then provide resource-feasible IT roadmaps that prioritize the deliverables and value propositions, making the overall plan more realistic and executable. If budgets increase, teams can effectively position the value that Intel and IT will receive. For example, in 2010 the team responsible for finance and human resource systems demonstrated the additional value to employees and managers of an increase in the spending guidance to cover an ERP upgrade.

Because the IT roadmaps have prioritized deliverables and cover a multiyear time horizon, management is able to use them as a risk management tool throughout the year. As the year progresses, changes in the environment and execution results can force management to address spending priorities concerning deliverables on the IT roadmaps. The IT roadmaps allow management to understand the multiyear impacts to programs if deliverables are accelerated or delayed and

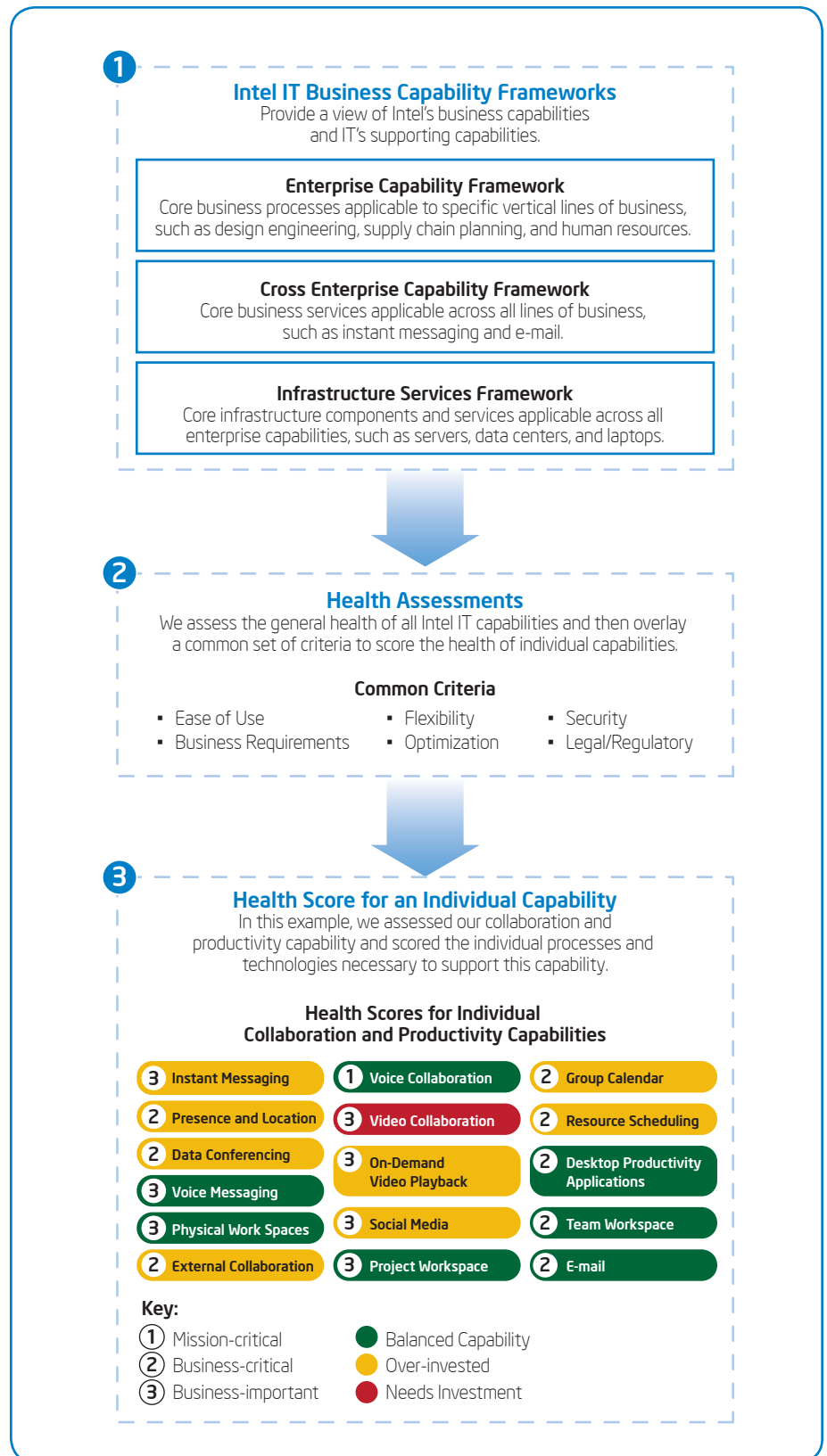


Figure 3. Intel IT Business Capability Frameworks enable self-assessment of IT capabilities across our core business processes, services, and infrastructure components.

Current State Tool Set

The Current State Assessment is just one tool Intel IT uses to provide a view of the current state of our environment. Teams across our organization use additional tools throughout the year to help assess the health of solutions, processes, and business performance. We may incorporate these considerations into the strategic planning process.

Voice of the User Survey. Focuses on our end-user community to understand satisfaction levels as well as expectations and productivity drivers for our IT solutions.

IT Capability Maturity Framework (IT-CMF). Intel IT initially developed the IT-CMF, and it is now part of the research and education agenda of the Innovation Value Institute, a consortium of more than 50 industry and academic organizations (www.ivii.ie). The IT-CMF encompasses maturity assessments, industry benchmarking, and improvement roadmaps to help us assess the management processes that underpin the delivery of IT capabilities. Process areas include enterprise architecture, innovation, technical infrastructure, governance, finance, and risk.

Key Performance Indicators. Business intelligence metrics for determining the quality, efficiency, and capacity of our day-to-day operations from a tactical perspective.

more fully understand the potential risks across multiple years. This makes for a more comprehensive and effective year-round planning process.

The IT roadmaps take into account overall resource requirements, our priorities, and funding targets for the organization. We

use them to determine priorities and guide the allocation of investment resources.

ANNUAL BUDGET

Once we have determined our investment priorities in the IT Roadmap Planning phase, we shift our focus to a more detailed and tactical effort to fund programs by looking at business value through our investment framework. From a finance perspective, the goal is to optimize our spending while aligning to Intel's business needs. We consider options that phase the implementation of projects so we can use our budget as effectively as possible. We use the IT roadmaps and associated value propositions to tactically guide the decision making on next year's budget and provide directional and material guidance for resource planning in the second and third years.

Investment Framework

Our investment framework helps us plan, monitor, and control IT spending in an optimized fashion. As a planning tool, it guides high-level prioritization and spending decisions, and helps ensure we are moving our resources and investment dollars to areas of highest value. The investment framework comprises four categories of IT expenditures:

- **Run.** Investments that maintain our business as it is today.
- **Grow.** Investments that improve or grow current business capabilities and operations.
- **Transform.** Investments that help Intel expand into new markets through existing or new products and technology.
- **Mandatory.** Spending to comply with legal or regulatory requirements.

We evaluate our investment plans each year to determine feasibility and value against our priorities, vision, and strategies. We do not have specific spending targets for each category; the percentage allocated to an individual category may be adjusted depending on business needs. For example, in some years, it may be appropriate to shift resources to programs in the "mandatory" category to address new

requirements or impending regulations, while in other years, we may need to shift to "run" investments to address infrastructure needs.

Our investment framework is dynamic. As "grow" and "transform" investments become integrated into business operations, they become "run" spending. In turn, we may focus new investments on developing capabilities to help grow and transform the company. To maintain the health of the process, we must continually identify opportunities for efficiency, such as application end-of-life, to balance our "run" and "mandatory" investments.

One of our goals is to optimize our "grow" investments while controlling our "run" investments. We invest in areas that help Intel generate increased revenues and add value to overall business operations, such as improving design cycle time, decreasing throughput time, minimizing inventory, or improving back-end support and operations.

To help ensure program execution consistent with our investment decisions, we evaluate our portfolio at key points in the budgeting timeline and compare it to the strategic initiatives and IT roadmaps that were funded. We also compare IT projects that compete for limited capital budget or human resources. For example, if we want to support factory expansion to enable growth as well as videoconferencing to enable business collaboration, we ask a series of questions:

- Does each investment align with our direction and our goals?
- Does one of these investments provide more benefit to Intel than the other?
- Can one of these investments be delayed to favor a more important business need?

The answers to these questions may not be clear-cut. To aid in decision making, we use a business valuation process. One component is net present value (NPV), a valuation methodology that enables us to estimate and evaluate total cost of ownership (TCO) over a multiyear period while providing a consistent and meaningful way to compare the valuation of multiple projects or alternatives. Our NPV

analysis relies primarily on hard costs and savings. We also identify and calculate soft or indirect benefits, such as productivity, which represent another data point for evaluating business value. Unless we see a cash or resource change, this data is kept separate to maintain the integrity of the NPV analysis.

Strategic Imperatives

After the budgeting process occurs in the fourth quarter, IT leaders develop and refine our organization's key strategic imperatives. The strategic imperatives are aligned with tangible corporate business objectives spanning the next three years; they therefore reflect IT's highest priorities and provide a measure of success for the next year.

Intel's corporate leaders assess imperatives from groups across Intel and elevate key imperatives for the coming year to the corporate level. Just a few years ago, IT's imperatives were not represented at the corporate level. Now that IT is delivering increasing value to the business through the strategic planning process and resulting programs, we contributed five key imperatives to the corporation in 2010.

Providing further evidence of how Intel IT plays a strategic role within Intel, several enterprise-wide employee bonus goals have a significant IT component, such as development of an online sales capability and reducing data center power consumption.

Communication Activities

Intel depends on the efficient and effective execution of our strategic plan. We therefore coordinate communication activities to share our work with different internal audiences and get feedback on our execution.

BUSINESS PARTNERS

Our IT Partnership Excellence Program helps us measure how well we are doing. During this process, our business partners score us on how well we are strategically aligned with their business goals, how well we are tactically aligned through our business solutions, and the effectiveness of our communications.

IT executives, including the chief information officer, also conduct a series of meetings with executives from each product group to discuss how to address challenges and opportunities. We look out three to five years and provide the perspective of a large enterprise customer to the product groups; they, in turn, provide customer feedback to us.

IT LEADERSHIP TEAM

In the first quarter of the following year, senior IT managers and thought leaders attend the IT Leadership Summit, focused on sharing the updated IT strategic direction. Participants meet to discuss IT's vision, mission, and strategic imperatives, and to build momentum for the coming year's investments. The event garners support from all areas of IT and defines success metrics for the year ahead.

One of Intel's highest priorities was to reach out to customers through an online Sales Center. Intel IT responded by prioritizing resources to develop and deploy an interactive platform that creates a dialogue with our customers.

—Gregory Pearson
Intel Vice President and General Manager
Worldwide Sales and Operations

IT EMPLOYEES

Communicating the strategic plan to all levels of our organization is an essential element of building understanding of and support for the strategic plan.

We partner with the IT employee communications group to develop a multifaceted communication approach that maximizes exposure of the strategic plan. This approach includes the use of e-mail briefings, presentations, newsletters, webcasts, and audiocasts. We also maintain a Web site that provides information about

key elements of our strategic process and plans, including Environmental Scans, Intel IT Business Capability Frameworks, CSA scoring, and IT roadmaps.

As a result of these communication activities, many individuals and teams across IT have expressed interest in becoming part of the process.

ALL INTEL EMPLOYEES

We use our IT newsletter to communicate our goals and priorities to all Intel employees. Additionally, we develop and deploy organizational health surveys to assess the extent to which Intel employees understand our organization's direction. Intel business managers are recognizing the success of our strategic planning process and the value of looking at future IT needs. As the strategic planning process increasingly becomes a part of our culture, they are proactively identifying strategic opportunities. One area we are addressing due to employee requests is the consumerization of IT—we recently began incorporating employee-owned smartphones and tablets into our computing environment.

DEVELOPING IT BEST PRACTICES

We incorporate valuable insight from our experiences back into the process by reviewing each element of the strategic planning cycle retrospectively to determine best-known methods for the coming year and to identify areas for improvement before the next cycle. Ongoing feedback from throughout the company will continue to drive incremental improvements as the process continues to mature.

Here is a summary of what we've learned so far:

- **Define the integration points to the IT governance processes.** Successfully moving a strategic plan from concept to reality depends on clear, well-defined

integration points with the budgeting, governance, and decision making processes within IT. Decision makers must understand the strategic directions and make decisions consistent with their intent.

- **Identify and manage planning data.** A wealth of data—vision, mission, and objective statements; Environmental Scans; analysis packages; benchmarking data; scenario forecasts; and more—flows throughout the strategic planning process. To lend focus to the process and avoid wasted efforts, deliverables for each step of the process must be clearly defined from the start. This helps ensure that the correct data is developed for effective decision making and also builds support for the process by informing stakeholders of the expected output of each step. The team also needs a data management plan that will effectively store the information for future reference. An effective plan balances data security with accessibility for authorized personnel.
- **Create and publicize the planning calendar and deliverables.** In a large organization such as Intel IT, multiple levels of planning often occur simultaneously. It is important to overlay the planning calendar on the process and publicize it, so different levels of the organization can adjust and integrate their planning activities appropriately. Ideally, the different levels of planning are staged so that the lower-level activities immediately follow the higher-level ones and use the same data for guidance.
- **Timing is essential.** Each step in the planning process must support the next stage. Direct influence is lost if there are dependency or timing missteps along the way.

- **Communicate data and messages.** Effectively communicating the strategic planning messages and associated data to middle and first-line managers helps them educate their employees. Well-informed employees are more likely to be motivated to contribute and provide timely execution.

CONCLUSION

A solid strategic planning process is critical to the long-term success and health of our organization. Since implementing our strategic planning process two years ago, we have been better able to instill agility into the organization and more closely align our IT investments with Intel corporate strategies.

Responding to the dynamic nature of our business, we have improved the way we conduct our Environmental Scans and capability assessments, added the strategic IT Roadmap Planning activity, and taken advantage of a new investment framework. We will continue to make refinements that enable us to better respond to the needs of our business partners and help us better understand the business value of the investments we make.

FOR MORE INFORMATION

- Intel IT Performance Report www.intel.com/it/apr.htm
- For more information on Intel IT best practices, visit www.intel.com/it

ACRONYMS

CSA	Current State Assessment
ERP	enterprise resource planning
IT-CMF	IT Capability Maturity Framework
NPV	net present value
SME	subject-matter expert
TCO	total cost of ownership

